

In the claims:

1-22. (Cancelled)

23. (new) In a radio receiver, a method for determining the strength of a received RF signal comprising:

receiving an RF signal;

down converting the RF signal to produce a received signal;

producing a first polarity of the received signal and a second polarity of the received signal;

generating a plurality of DC offsets of increasing value;

imposing each of the plurality of DC offsets on the first polarity of the received signal to produce a plurality of DC offset first polarity received signals;

comparing each of the plurality of DC offset first polarity received signals to the second polarity of the received signal; and

based upon the comparison of the plurality of DC offset first polarity received signals to the second polarity of the received signal, determining the strength of the received RF signal.

24. (new) the method of claim 23, wherein comparing each of the plurality of DC offset first polarity received signals to the second polarity of the received signal includes determining when one or more of the plurality of DC offset first polarity received signals is overcome by the second plurality of the received signal.

25. (new) The method of claim 24, wherein a DC offset first polarity received signal is overcome by the second plurality of the received signal when voltage peaks of the DC offset first polarity received signal and the second plurality of the received signal overlap.

26. (new) The method of claim 23, wherein the plurality of DC offsets increase by a step increment equal to the total dynamic range of the received signal in dB divided by the number of the plurality of DC offsets.

27. (new) The method of claim 23, wherein the plurality of DC offsets are divided into two or more portions and the method further comprises amplifying the received signal for at least one of the portions.

28. (method) The method of claim 27:

wherein the plurality of DC offsets are divided into a first portion of DC offsets starting with a DC offset of smallest magnitude and increasing by a step increment and a second portion of DC offsets ending with a DC offset of the greatest magnitude; and
further comprising amplifying the received signal for the first portion of DC offsets.

29. (new) The method of claim 23, further comprising programmably amplifying the received signal prior to imposing each of the plurality of DC offsets to adjust for variations in gains of processing components.

30. (new) The method of claim 23, wherein the received signal is at one of baseband or an intermediate frequency.

31. (new) A wireless receiver comprising:

a low noise amplifier that receives and amplifies an RF signal;

a mixer communicatively coupled to the low noise amplifier that down converts the RF signal to produce a received signal;

a circuit communicatively coupled to the mixer that produces a first polarity of the received signal and a second polarity of the received signal;

a rectifier communicatively coupled to the circuit that:

generates a plurality of DC offsets of increasing value;

imposes each of the plurality of DC offsets on the first polarity of the received signal to produce a plurality of DC offset first polarity received signals; and

compares each of the plurality of DC offset first polarity received signals to the second polarity of the received signal to produce a rectifier output; and

a decoder communicatively coupled to the rectifier that determines the strength of the received RF signal based upon the rectifier output.

32. (new) the wireless receiver of claim 31, wherein in comparing each of the plurality of DC offset first polarity received signals to the second polarity of the received signal, the rectifier determines when one or more of the plurality of DC offset first polarity received signals is overcome by the second plurality of the received signal.

33. (new) The wireless receiver of claim 32, wherein the rectifier determines that a DC offset first polarity received signal is overcome by the second plurality of the received signal when voltage peaks of the DC offset first polarity received signal and the second plurality of the received signal overlap.

34. (new) The wireless receiver of claim 31, wherein the plurality of DC offsets increase by a step increment equal to the total dynamic range of the received signal in dB divided by the number of the plurality of DC offsets.

35. (new) The wireless receiver of claim 31, wherein the plurality of DC offsets are divided into two or more portions and the wireless receiver further comprises an amplifier that amplifies the received signal for at least one of the portions.

36. (wireless receiver) The wireless receiver of claim 35:
wherein the plurality of DC offsets are divided into a first portion of DC offsets starting with a DC offset of smallest magnitude and increasing by a step increment and a second portion of DC offsets ending with a DC offset of the greatest magnitude; and
the amplifier amplifies the received signal for the first portion of DC offsets.

37. (new) The wireless receiver of claim 31, further comprising a programmable amplifier that receives and amplifies the received signal prior to imposing each of the plurality of DC offsets to adjust for variations in gains of processing components.

38. (new) The wireless receiver of claim 31, wherein the lower frequency received signal is one of baseband or an intermediate frequency.

39. (new) A wireless receiver comprising:
a low noise amplifier that receives and amplifies an RF signal;
a mixer communicatively coupled to the low noise amplifier that down converts the RF signal to produce a received signal at an intermediate frequency;
a band pass filter operably coupled to the mixer that produces a first polarity of the received signal and a second polarity of the received signal;
a variable gain amplifier communicatively coupled to the band pass filter that controllably amplifies the first polarity of the received signal and the second polarity of the received signal;
a rectifier communicatively coupled to the band pass filter that:
generates a plurality of DC offsets of increasing value;
imposes each of the plurality of DC offsets on the first polarity of the received signal to produce a plurality of DC offset first polarity received signals; and
compares each of the plurality of DC offset first polarity received signals to the second polarity of the received signal to produce a rectifier output; and
a decoder communicatively coupled to the rectifier that determines the strength of the received RF signal based upon the rectifier output.


40. (new) the wireless receiver of claim 39, wherein in comparing each of the plurality of DC offset first polarity received signals to the second polarity of the received signal, the rectifier determines when one or more of the plurality of DC offset first polarity received signals is overcome by the second plurality of the received signal.

41. (new) The wireless receiver of claim 40, wherein the rectifier determines that a DC offset first polarity received signal is overcome by the second plurality of the received signal when voltage peaks of the DC offset first polarity received signal and the second plurality of the received signal overlap.

42. (new) The wireless receiver of claim 41, wherein the plurality of DC offsets increase by a step increment equal to the total dynamic range of the received signal in dB divided by the number of the plurality of DC offsets.

Respectfully submitted,

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